



PubMed     Nucleotide     Protein     Genome     Structure     PopSet     Taxonomy     OMIM     Books

Search  for

              

              

1: P06731. CARCINOEMBRYONIC ...[gi:115940]

[BLink](#), [OMIM](#), [Related Sequences](#), [PubMed](#), [Taxonomy](#), [LinkOut](#)

**LOCUS** CCEM\_HUMAN 702 aa **PRI** 30-MAY-2000  
**DEFINITION** CARCINOEMBRYONIC ANTIGEN PRECURSOR (CEA) (MECONIUM ANTIGEN 100) (CD66E ANTIGEN).  
**ACCESSION** P06731  
**PID** g115940  
**VERSION** P06731 GI:115940  
**DBSOURCE** swissprot: locus CCEM\_HUMAN, accession P06731;  
 class: standard.  
 created: Jan 1, 1988.  
 sequence updated: Dec 1, 1992.  
 annotation updated: May 30, 2000.  
 xrefs: gi: gi: [178676](#), gi: gi: [178677](#), gi: gi: [180207](#), gi: gi: [180211](#), gi: gi: [180200](#), gi: gi: [180201](#), gi: gi: [180202](#), gi: gi: [180203](#), gi: gi: [180204](#), gi: gi: [180205](#), gi: gi: [180206](#), gi: gi: [180208](#), gi: gi: [180209](#), gi: gi: [180222](#), gi: gi: [180223](#), gi: gi: [29854](#), gi: gi: [825638](#), gi: gi: [180198](#), gi: gi: [180199](#), gi: gi: [180240](#), gi: gi: [180241](#), gi: gi: [87039](#)  
 xrefs (non-sequence databases): MIM [114890](#), PFAM [PF00047](#)  
**KEYWORDS** Immunoglobulin domain; Glycoprotein; GPI-anchor; Membrane; Signal.  
**SOURCE** human.  
**ORGANISM** Homo sapiens  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.  
**REFERENCE** 1 (residues 1 to 702)  
**AUTHORS** Schrewe,H., Thompson,J., Bona,M., Hefta,L.J., Maruya,A., Hassauer,M., Shively,J.E., von Kleist,S. and Zimmermann,W.  
**TITLE** Cloning of the complete gene for carcinoembryonic antigen: analysis of its promoter indicates a region conveying cell type-specific expression  
**JOURNAL** Mol. Cell. Biol. 10 (6), 2738-2748 (1990)  
**MEDLINE** 90258861  
**REMARK** SEQUENCE FROM N.A.  
**REFERENCE** 2 (residues 1 to 702)  
**AUTHORS** Beauchemin,N., Benchimol,S., Cournoyer,D., Fuks,A. and Stanners,C.P.  
**TITLE** Isolation and characterization of full-length functional cDNA clones for human carcinoembryonic antigen  
**JOURNAL** Mol. Cell. Biol. 7 (9), 3221-3230 (1987)  
**MEDLINE** 88038876  
**REMARK** SEQUENCE FROM N.A.  
**REFERENCE** 3 (residues 1 to 702)  
**AUTHORS** Barnett,T., Goebel,S.J., Nothdurft,M.A. and Elting,J.J.  
**TITLE** Carcinoembryonic antigen family: characterization of cDNAs coding for NCA and CEA and suggestion of nonrandom sequence variation in their conserved loop-domains  
**JOURNAL** Genomics 3 (1), 59-66 (1988)  
**MEDLINE** 89122014  
**REMARK** SEQUENCE FROM N.A.  
**REFERENCE** 4 (residues 1 to 702)  
**AUTHORS** Oikawa,S., Nakazato,H. and Kosaki,G.

TITLE Primary structure of human carcinoembryonic antigen (CEA) deduced from cDNA sequence  
 JOURNAL Biochem. Biophys. Res. Commun. 142 (2), 511-518 (1987)  
 MEDLINE 87128144  
 REMARK SEQUENCE OF 5-702 FROM N.A.  
 REFERENCE 5 (residues 1 to 702)  
 AUTHORS Zimmermann,W., Ortlieb,B., Friedrich,R. and von Kleist,S.  
 TITLE Isolation and characterization of cDNA clones encoding the human carcinoembryonic antigen reveal a highly conserved repeating structure  
 JOURNAL Proc. Natl. Acad. Sci. U.S.A. 84 (9), 2960-2964 (1987)  
 MEDLINE 87204247  
 REMARK SEQUENCE OF 331-702 FROM N.A.  
 COMMENT

-----  
 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. The original entry is available from <http://www.expasy.ch/sprot> and <http://www.ebi.ac.uk/sprot>  
 -----

[SUBCELLULAR LOCATION] ATTACHED TO THE MEMBRANE BY A GPI-ANCHOR.  
 [TISSUE SPECIFICITY] FOUND IN ADENOCARCINOMAS OF ENDODERMALLY DERIVED DIGESTIVE SYSTEM EPITHELIUM AND FETAL COLON.  
 [PTM] COMPLEX IMMUNOREACTIVE GLYCOPROTEIN WITH A MW OF 180 KDA COMPRISING 60% CARBOHYDRATE.  
 [SIMILARITY] BELONGS TO THE IMMUNOGLOBULIN SUPERFAMILY. CONTAINS 7 IG-LIKE DOMAINS. BELONGS TO THE CARCINOEMBRYONIC ANTIGEN SUBFAMILY.  
 [DATABASE] NAME=PROW; NOTE=CD guide CD66e entry;  
 WWW='http://www.ncbi.nlm.nih.gov/prow/cd/cd66e.htm'.  
 -----

FEATURES Location/Qualifiers  
 source 1..702  
     /organism="Homo sapiens"  
     /db\_xref="taxon:9606"  
 Region 1..702  
     /region\_name="Signal"  
 Protein 1..702  
     /product="CARCINOEMBRYONIC ANTIGEN PRECURSOR"  
 Region (1.701)..702  
     /region\_name="Propeptide"  
     /note="REMOVED IN MATURE FORM."  
 Region 35..144  
     /region\_name="Domain"  
     /note="IG-LIKE DOMAIN 1."  
 Region 35..(36.702)  
     /region\_name="Mature chain"  
     /note="CARCINOEMBRYONIC ANTIGEN."  
 Site 104  
     /site\_type="glycosylation"  
     /note="N-LINKED (GLCNAC...) (POTENTIAL)."  
 Site 115  
     /site\_type="glycosylation"  
     /note="N-LINKED (GLCNAC...) (POTENTIAL)."  
 Region 146..237  
     /region\_name="Domain"  
     /note="IG-LIKE DOMAIN 2."  
 Site 152  
     /site\_type="glycosylation"  
     /note="N-LINKED (GLCNAC...) (POTENTIAL)."  
 Site 182  
     /site\_type="glycosylation"  
     /note="N-LINKED (GLCNAC...) (POTENTIAL)."  
 Site 197  
     /site\_type="glycosylation"  
     /note="N-LINKED (GLCNAC...) (POTENTIAL)."

Site 204  
/site\_type="glycosylation"  
/note="N-LINKED (GLCNAC...) (POTENTIAL)."

Site 208  
/site\_type="glycosylation"  
/note="N-LINKED (GLCNAC...) (POTENTIAL)."

Region 238..322  
/region\_name="Domain"  
/note="IG-LIKE DOMAIN 3."

Site 246  
/site\_type="glycosylation"  
/note="N-LINKED (GLCNAC...) (POTENTIAL)."

Site 256  
/site\_type="glycosylation"  
/note="N-LINKED (GLCNAC...) (POTENTIAL)."

Site 274  
/site\_type="glycosylation"  
/note="N-LINKED (GLCNAC...) (POTENTIAL)."

Site 288  
/site\_type="glycosylation"  
/note="N-LINKED (GLCNAC...) (POTENTIAL)."

Site 292  
/site\_type="glycosylation"  
/note="N-LINKED (GLCNAC...) (POTENTIAL)."

Site 309  
/site\_type="glycosylation"  
/note="N-LINKED (GLCNAC...) (POTENTIAL)."

Region 320  
/region\_name="Conflict"  
/note="MISSING (IN REF. 4)."

Region 324..415  
/region\_name="Domain"  
/note="IG-LIKE DOMAIN 4."

Site 330  
/site\_type="glycosylation"  
/note="N-LINKED (GLCNAC...) (POTENTIAL)."

Site 351  
/site\_type="glycosylation"  
/note="N-LINKED (GLCNAC...) (POTENTIAL)."

Site 360  
/site\_type="glycosylation"  
/note="N-LINKED (GLCNAC...) (POTENTIAL)."

Site 375  
/site\_type="glycosylation"  
/note="N-LINKED (GLCNAC...) (POTENTIAL)."

Region 416..498  
/region\_name="Domain"  
/note="IG-LIKE DOMAIN 5."

Site 432  
/site\_type="glycosylation"  
/note="N-LINKED (GLCNAC...) (POTENTIAL)."

Site 466  
/site\_type="glycosylation"  
/note="N-LINKED (GLCNAC...) (POTENTIAL)."

Site 480  
/site\_type="glycosylation"  
/note="N-LINKED (GLCNAC...) (POTENTIAL)."

Region 502..593  
/region\_name="Domain"  
/note="IG-LIKE DOMAIN 6."

Site 508  
/site\_type="glycosylation"  
/note="N-LINKED (GLCNAC...) (POTENTIAL)."

Site 529  
/site\_type="glycosylation"

```

Site      /note="N-LINKED (GLCNAC...) (POTENTIAL)."  

          553  

          /site_type="glycosylation"  

Site      /note="N-LINKED (GLCNAC...) (POTENTIAL)."  

          560  

          /site_type="glycosylation"  

Site      /note="N-LINKED (GLCNAC...) (POTENTIAL)."  

          580  

          /site_type="glycosylation"  

Region    /note="N-LINKED (GLCNAC...) (POTENTIAL)."  

          594..677  

          /region_name="Domain"  

Site      /note="IG-LIKE DOMAIN 7."  

          612  

          /site_type="glycosylation"  

Site      /note="N-LINKED (GLCNAC...) (POTENTIAL)."  

          650  

          /site_type="glycosylation"  

Site      /note="N-LINKED (GLCNAC...) (POTENTIAL)."  

          665  

          /site_type="glycosylation"  

          /note="N-LINKED (GLCNAC...) (POTENTIAL)."  


```

## ORIGIN

```

1 mespsapphr wcipwqrlll taslltfwmp pttaklties tpfnvaegke vlllvhnlpq
61 hlfgywykg ervdgnrqii gyvigttqat pgpaysgrei iypnaslliq niiqndtgfy
121 tlhvksdlv neeatgqfrv ypelpkpsis snskpvedk davaftcepe tqdatylwwv
181 nnqslpvspr lqlsngnrtl tlfvtrndt asykctqnp vsarrsdsvi lnvlygpdap
241 tisplntsy sgenlnlsch aasnppaqys wfvngtfqqs tqelfipnit vnsgsytcq
301 ahnsdtglr ttvttitvya eppkpfitsn nsnpvededa valtcepei nttylwvwnn
361 qslpvsprlq lsndnrllt lsvtrndvvp yecgignels vdhsdpvilm vlygpdpti
421 spsytyyrg vnlslscaa snppaqyswl idgniqqhtq elfisnitek nsglytcqan
481 nsasghsrtt vktitvsacl pkpsissnns kpvedkdava ftcepeaqnt tylwvngqs
541 lpsprlqls ngnrtltlfn vtrndarayv cgignsvsan rsdpvtldvl ygpdtpiisp
601 pdssylsgan lnlschsasn pspqyswrin gipqqhtqvl fiakitpnnn gtyacfvsl
661 atgrnnsivk sitvsasgts pglsgatvg imigvlvgva li

```

//

Revised: October 24, 2001.

[Disclaimer](#) | [Write to the Help Desk](#)  
[NCBI](#) | [NLM](#) | [NIH](#)